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10/662,812	09/16/2003	Yang-lim Choi	1293.1916	1080

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EXAMINER

DOAN, TRANG T

ART UNIT	PAPER NUMBER
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2131

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/662,812

Applicant(s)

CHOI, YANG-IIM

Examiner

Trang Doan

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to the amendment filed on 05/02/2007.
2. Claims 1-43 are pending for consideration.

Response to Arguments

3. Regarding to the rejection under 35 U.S.C. §101, examiner has withdrawn only claims 1 and 31 because applicant's arguments are persuasive. However, applicant's arguments with respect to claim 43 that claim 43 is submitted to be statutory per se, since carrier waves, i.e., signals, are an article of manufacture, examiner disagrees with applicant's arguments.

According to the Interim Guidelines for Examination of Patent Applications, the Supreme Court has read the term "manufacture" in accordance with its dictionary definition to mean "the production of articles for use from raw or prepared materials by giving to these materials new forms, qualities, properties, or combinations, whether by hand-labor or by machinery." *Diamond v. Chakrabarty*, 447 U.S. 303, 308, 206 USPQ 193, 196-97 (1980) (quoting *American Fruit Growers, Inc. v. Brogdex Co.*, 283 U.S. 1, 11, 8 USPQ 131, 133 (1931), which, in turn, quotes the Century Dictionary). Other courts have applied similar definitions. See *American Disappearing Bed Co. v. Arnaelsteen*, 182 F. 324, 325 (9th Cir. 1910), cert. denied, 220 U.S. 622 (1911). These definitions require physical substance, which a claimed signal does not have. Congress can be presumed to be aware of an administrative or judicial interpretation of a statute and to adopt that interpretation when it re-enacts a statute without change. *Lorillard v.*

Pons, 434 U.S. 575, 580 (1978). Thus, Congress must be presumed to have been aware of the interpretation of manufacture in American Fruit Growers when it passed the 1952 Patent Act.

A manufacture is also defined as the residual class of product. 1 Chisum, § 1.02[3] (citing W. Robinson, The Law of Patents for Useful Inventions 270 (1890)). A product is a tangible physical article or object, some form of matter, which a signal is not. That the other two product classes, machine and composition of matter, require physical matter is evidence that a manufacture was also intended to require physical matter. A signal, a form of energy, does not fall within either of the two definitions of manufacture. Thus, a signal does not fall within one of the four statutory classes of § 101.

Therefore, examiner maintains the §101 rejection with respect to claim 43.

4. Applicant's arguments filed 05/02/2007 have been fully considered but they are not persuasive.

Regarding to the Remarks, applicant's arguments that Cato does not disclose at least "generating a plurality of metadata fragment data by partitioning metadata to be transmitted", "metadata fragment data that are predetermined semantic units", and "each metadata fragment data and the corresponding metadata-related information are connected to each other by pointer information". Examiner respectfully disagrees.

Cato discloses a digital rights management in peer-to-peer network. Digital information i.e., video, music and software, shares among peer. According to TCP/IP transport layers, when a file is requested, usually the file to be transferred will be divided

into smaller chunks. Since Cato also uses the TCP/IP transport layers to deliver authorized digital content. Therefore, examiner assumes that the digital content will have to parse into smaller chunks for delivery which is equivalent to generating a plurality of metadata fragment data by partitioning metadata to be transmitted and metadata fragment data that are predetermined semantic units. Examiner notes, each chunk of the digital content includes metadata, which describes rules associated with the protected digital content (see paragraph 0076).

Cato further discloses each metadata fragment data and the corresponding metadata-related information are connected to each other by pointer information (see figure 24 and Abstract section and paragraphs 0096, 0128, 0131 and 0144).

The examiner is not trying to teach the invention but is merely trying to interpret the claim language in its broadest and reasonable meaning. The examiner will not interpret to read narrowly the claim language to read exactly from the specification, but will interpret the claim language in the broadest reasonable interpretation in view of the specification. Therefore, the examiner asserts that cited prior art does teach or suggest the subject matter broadly recited in independent Claims 1, 13, 21, 31-33 and 41-43, and in subsequent dependent Claims. Accordingly, rejections for claims 1-43 are respectfully maintained.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claim 43 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

7. Regarding claim 43, claim 43 recites a machine readable storage storing at least one computer program controlling networked computers according to a process comprising: performing metadata transmission-level or source-level authentication in any directional type data channel environment by partitioning to be transmitted metadata into fragments, and processing a metadata authentication data container comprising at least one of the metadata fragments and metadata fragment authentication information using the one metadata fragment and a data format type of the metadata. According to the applicant's specification, **the machine readable storage includes a carrier wave**, i.e., signals, on page 21 paragraph [0067]. Since claims that recite nothing but physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Thus, a signal does not fall within one of the four statutory classes of § 101. Therefore, claim 43 is rejected for reciting non-statutory subject matter.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent

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granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-43 are rejected under 35 U.S.C. 102(e) as being anticipated by Cato et al. (US 2003/0120928) (hereinafter Cato).

10. Regarding claim 1, Cato teaches generating a plurality of metadata fragment data by partitioning metadata to be transmitted (Cato: paragraphs [0076, 0078 and 0094]); selecting a predetermined metadata fragment data from among the plurality of metadata fragment data (Cato: paragraphs [0081 and 0090]); generating metadata-related information using the selected metadata fragment data (Cato: see Abstract section and paragraphs [0091]; and transmitting the selected metadata fragment data and the metadata-related information with data format information indicating a type of the selected metadata fragment data (Cato: see figures [6, 8] and paragraphs [0089, 0091, 0093, 0096 and 0099]).

11. Regarding claims 2, 14, 26, Cato teaches wherein the selected metadata fragment data, the metadata-related information, and the data format information of the selected metadata fragment data are transmitted in a metadata container (Cato: see figure 8 and paragraphs [0096 and 0101]).

12. Regarding claims 3, 15, 27, Cato teaches wherein the data format information indicates whether the selected metadata fragment data has a binary XML format or a text XML format (Cato: see figure 9 and paragraph [0101]).

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13. Regarding claims 4, 16, 28, Cato teaches wherein the generated plurality of metadata fragment data are predetermined semantic units of the metadata to be transmitted (Cato: paragraph [0081]).

14. Regarding claims 5, 17 and 29, Cato teaches wherein a metadata authentication level flag specifying a metadata authentication level is further contained in the metadata container (Cato: paragraphs [0103 and 0104]).

15. Regarding claims 6, 18 and 22, Cato teaches wherein the metadata-related information is metadata digest information obtained by substituting the selected metadata fragment data into a unidirectional function (Cato: paragraphs [0108]).

16. Regarding claims 7, 19, 23 and 25, Cato teaches wherein the unidirectional function is a hash function (Cato: paragraphs [0108]).

17. Regarding claim 8, Cato teaches generating metadata authentication signature information using the metadata-related information and a first encryption key; and inserting the metadata authentication signature information in the metadata container containing the selected metadata fragment data (Cato: paragraphs [0085, 0095 and 0107]).

18. Regarding claim 9, Cato teaches wherein the metadata authentication signature information is obtained by substituting the metadata-related information and the first encryption key into a unidirectional function (Cato: paragraph [0009]).

19. Regarding claim 10, Cato teaches encrypting the first encryption key using a second encryption key; and inserting the encrypted first encryption key into the

metadata container containing the selected metadata fragment data (Cato: paragraphs [0085, 0091 and 0135]).

20. Regarding claims 11 and 20, Cato teaches wherein the plurality of metadata fragment data and corresponding metadata-related information are inserted into the metadata container, and each metadata fragment data and the corresponding metadata-related information are connected to each other by pointer information (Cato: paragraphs [0096, 0128 and 0095]).

21. Regarding claims 12 and 30, Cato teaches wherein the plurality of metadata fragment data and corresponding metadata-related information and metadata authentication signature information are inserted into the metadata container, and each metadata fragment data and the corresponding metadata-related information and metadata authentication signature information are connected to one another by pointer information (Cato: paragraphs [0095, 0128 and 0141]).

22. Regarding claim 13, Cato teaches reading predetermined metadata fragment data, metadata-related information, and data format information indicating a type of the predetermined metadata fragment data, from the received metadata; generating metadata-related information using the predetermined metadata fragment data and the read data format information; and determining whether the received metadata has been authenticated by comparing the generated metadata-related information with the read metadata-related information (Cato: see Abstract section and paragraphs [0026, 0090, 0095 and 0129-0130]).

23. Regarding claim 21, this claim has limitations that is similar to those of claims 1 and 13, thus it is rejected with the same rationale applied against claims 1 and 13 above.

24. Regarding claim 24, Cato teaches wherein the generated metadata authentication signature information is obtained by substituting the generated metadata-related information and the decrypted first encryption key into a unidirectional function (Cato: paragraphs [0084 and 0095]).

25. Regarding claim 31, this claim has limitations that is similar to those of claim 1, thus it is rejected with the same rationale applied against claim 1 above.

26. Regarding claim 32, this claim has limitations that is similar to those of claims 1 and 13, thus it is rejected with the same rationale applied against claims 1 and 13 above.

27. Regarding claim 33, this claim has limitations that is similar to those of claims 1 and 13, thus it is rejected with the same rationale applied against claims 1 and 13 above.

28. Regarding claim 34, Cato teaches wherein a format of the metadata authentication container comprises a header section, a metadata fragment section and a metadata fragment authentication information section (Cato: see figure 8 and paragraph [0097]).

29. Regarding claim 35, Cato teaches wherein the metadata authentication container is defined according to a simple object access protocol (SOAP) message (Cato: see figure 9 and paragraph [0101]).

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30. Regarding claim 36, Cato teaches wherein the SOAP message comprises a SOAP header comprising the metadata fragment data authentication information and a SOAP body comprising the metadata fragment (Cato: see figure 9 and paragraph [0101]).

31. Regarding claim 37, Cato teaches wherein the programmed computer processor of the metadata transmission server further: includes a plurality of the metadata fragments in the metadata authentication container, allots indexing information to each included metadata fragment, and includes the indexing information in the metadata authentication container; and the metadata receiving client further comprises a data storage storing an index list and predetermined metadata fragments, and the programmed computer processor of the metadata receiving client uses the stored predetermined metadata fragments according to the metadata authentication container indexing information and the stored index list to generate the metadata fragment authentication information (Cato: see Abstract section and paragraphs [0079, 0095, 0096 and 0128]).

32. Regarding claim 38, Cato teaches wherein the programmed computer processor of the metadata transmission server further: includes a plurality of the metadata fragments and corresponding metadata fragment authentication information in the metadata authentication container, includes pointer information connecting each included metadata fragment to the corresponding metadata fragment authentication information; and the programmed computer processor of the metadata receiving client determines the transmitted container metadata fragment authentication information of

the transmitted metadata fragment based upon the pointer information (Cato: see Abstract section and paragraphs [0026, 0079, 0090, 0095, 0096 and 0128]).

33. Regarding claim 39, Cato teaches wherein the metadata transmission server comprises a right management protection system to maintain the pointer information as a source level authentication of the transmitted metadata (paragraphs [0105 and 0107-0108]).

34. Regarding claim 40, Cato teaches wherein the metadata fragment authentication information is encryption management information regarding encryption of the fragment data (Cato: paragraphs [0085 and 0091]).

35. Regarding claim 41, Cato teaches authenticating a fragment of metadata; associating information about the authentication to the metadata fragment; and authenticating the metadata transmitted based upon the metadata fragment authentication information (Cato: see Abstract section and paragraphs [0026, 0090, 0124, 0131 and 0134]).

36. Regarding claim 42, this claim has limitations that is similar to those of claims 1, 13 and 41, thus it is rejected with the same rationale applied against claims 1, 13 and 41 above.

37. Regarding claim 43, Cato teaches a machine readable storage storing at least one computer program controlling networked computers according to a process comprising: performing metadata transmission-level or source-level authentication in any directional type data channel environment by partitioning to be transmitted metadata into fragments, and processing a metadata authentication data container

comprising at least one of the metadata fragments and metadata fragment authentication information using the one metadata fragment and a data format type of the metadata (Cato: see Abstract section and figure 8 and paragraphs [0107, 0112 and 0090]).

Conclusion

38. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trang Doan whose telephone number is (571) 272-0740. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Trang Doan
Examiner
Art Unit 2131

T.D.

CHRISTOPHER REVAK
PRIMARY EXAMINER

